What is claimed is:

1. An optical wavelength division multiplexed transmission system in a bidirectional optical wavelength division multiplexed transmission system for transmitting an upstream optical signal and a downstream optical signal along a single line,

said optical wavelength multiplexed transmission system comprising:

a transmitting unit setting the upstream optical signal to a first band and transmitting the upstream optical signal set to the first band, and setting the downstream optical signal to a second band which is different from the first band and transmitting the downstream optical signal set to the second band; and

a distributed amplifier unit having a first pumping light source for pumping only the upstream optical signal set to the first band, and a second pumping light source for pumping only the downstream optical signal set to the second band.

2. The optical wavelength division multiplexed transmission system according to claim 1, wherein said distributed amplifier unit performs distributed Raman amplification.

3. The optical wavelength division multiplexed transmission system according to claim 1, wherein said first pumping light source amplifies the upstream optical signal set to the first band through backward pumping, and said second pumping light source amplifies the downstream optical signal set to the second band through backward pumping.

4. The optical wavelength division multiplexed transmission system according to claim 1, wherein each of said first and second pumping light sources includes a plurality of light sources, each of said plurality of light sources having a different wavelength.

5. The optical wavelength division multiplexed transmission system according to claim 1, comprising:

a wavelength-selective multiplexing/demultiplexing unit, located at one or both ends of said distributed amplifier unit, for separating the upstream and downstream optical signals from each other and combining the separated upstream and downstream optical signals with each other; and

a discrete amplifier unit amplifying each of the upstream and downstream optical signals respectively set

to the first and second bands.

6. The optical wavelength division multiplexed transmission system according to claim 1, comprising:

a multilayer thin film filter unit, located at one or both ends of said distributed amplifier unit, for separating the upstream and downstream optical signals from each other and combining the separated upstream and downstream optical signals with each other; and

a discrete amplifier unit amplifying each of the upstream and downstream optical signals respectively set to the first and second bands.

7. The optical wavelength division multiplexed transmission system according to claim 1, comprising:

a circulator unit, located at one or both ends of said distributed amplifier unit, for separating the upstream and downstream optical signals from each other and combining the separated upstream and downstream optical signals with each other; and

a discrete amplifier unit amplifying each of the upstream and downstream optical signals respectively set to the first and second bands.